

CLAIMS

What is claimed is:

1. A marking engine for marking an image onto a sheet, said marking engine having an image transfer section, a fuser section, and a travel path for transporting said sheet from said image transfer section to said fuser section, said travel path comprising:

a vacuum transport for receiving said sheet from said image transfer section and moving said sheet towards said fuser; and

a fuser entrance guide for receiving said sheet from said vacuum transport and guiding said sheet into said fuser section, said guide comprising:

a housing adapted to maintain a vacuum therein;

a base plate on said housing; said base plate having a lower surface adapted to be contacted by said sheet as said sheet moves between said image transfer and fuser section, said lower surface having vacuum ports therein through which said vacuum in said housing is applied against said sheet; and

a controller operative to vary said vacuum in said housing as said sheet moves across said lower surface of said fuser entrance guide.

2. The marking engine of claim 1 comprising:

a vacuum source fluidly connected to said housing;

a valve for controlling the vacuum from said vacuum source into said housing;

a sensor positioned along said vacuum transport for sensing said sheet and generating a signal as said sheet moves past said sensor; and

said controller being operative to receive said signal and actuate said valve to increase said vacuum in said housing as said sheet moves across said fuser entrance guide.

3. The marking engine of claim 2 wherein said sensor senses the trail edge of said sheet as said sheet moves along said vacuum transport.

4. The marking engine of claim 3 wherein said controller includes a first time delay which is initiated by said signal from said sensor to thereby delay actuation of said valve and increase said vacuum until the lead edge of said sheet is in engagement with said fuser section and said sheet is being driven thereby.

5. The marking engine of claim 4 wherein said controller includes a second time delay which is set to maintain the increased vacuum on said fuser entrance guide until said trail edge of said sheet has moved substantially across said fuser entrance guide.

6. The marking engine of claim 2 wherein said sensor senses the lead edge of said sheet as said sheet moves along said vacuum transport.

7. The marking engine of claim 1 wherein said controller is operative to vary said vacuum based on one or more timing signals generated by movement of an electrophotographic member.

8. A fuser entrance guide for an marking engine comprising:

a housing adapted to be positioned between an image transfer section and the fuser section within said marking engine, said housing adapted to maintain a vacuum therein;

a base plate on said housing; said base plate having a lower surface adapted to contacted by said sheet as said sheet moves between said film and fuser section, said lower surface having ports therein through which said vacuum is applied to said sheet; and

a controller operative to vary said vacuum in said housing as said sheet moves across said lower surface of said fuser entrance guide.

9. The marking engine of claim 8 comprising:

a vacuum source fluidly connected to said housing;

a valve for controlling the vacuum from said vacuum source into said housing;

a sensor positioned along said vacuum transport for sensing said sheet and generating a signal as said sheet moves past said sensor; and

said controller being operative to receive said signal and actuate said valve to increase said vacuum in said housing as said sheet moves across said fuser entrance guide.

10. The marking engine of claim 9 wherein said sensor senses the trail edge of said sheet as said sheet moves along said vacuum transport.

11. The marking engine of claim 10 wherein said controller includes a first time delay which is initiated by said signal from said sensor to thereby delay actuation of said valve and increase said vacuum until the lead edge of said sheet is in engagement with said fuser section and said sheet is being driven thereby.

12. The marking engine of claim 11 wherein said controller includes a second time delay which is set to maintain the increased vacuum on said fuser entrance guide until said trail edge of said sheet has moved substantially across said fuser entrance guide.

13. The marking engine of claim 9 wherein said sensor senses the lead edge of said sheet as said sheet moves along said vacuum transport.

14. The marking engine of claim 8 wherein said controller is operative to vary said vacuum based on one or more timing signals generated by movement of an electrophotographic member.

15. A method of guiding a sheet of from a vacuum transport in a marking engine into a fuser section of said engine, said method comprising:

providing a guide between the exit of said vacuum transport and the entrance of said fuser section;

applying a vacuum through the lower surface of said guide to attract and hold said sheet against said lower surface; and

varying said vacuum as said sheet moves from said vacuum transport towards said fuser section, said vacuum being at its lowest level as the lead edge of said sheet engages said guide and being at its highest level as the trail edge of said sheet passes across said guide.

16. The method of claim 15 wherein the step of varying said vacuum includes:

increasing said vacuum to its highest level after said sheet enters and becomes driven by said fuser section.

17. The method of claim 16 including:

returning said vacuum to its lowest level after said trail edge of said sheet has moved substantially across said guide.

18. The method of claim 15 including:

sensing the trail edge of said sheet as said sheet moves along said vacuum transport and generating a signal in response thereto; and

increasing said vacuum to its highest level in response to said signal; and

returning said vacuum to its lowest level after said trail edge of said sheet has moved substantially across said guide.

19. The method of claim 18 including:

delaying the increase in vacuum from the time said trail edge of said sheet is sensed along said vacuum transport until said trail edge reaches said guide.

20. The method of claim 19 including:
delaying returning of said vacuum to its lowest level until the trail edge of said sheet
has moved substantially across said guide.